

disclosures of which are incorporated herein by reference.

The various features of novelty which characterize the invention are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and specific objects attained by its uses, reference is made to the accompanying drawings and descriptive matter in which preferred embodiments of the invention are illustrated.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

Fig. 1 is a front of the auxiliary eyeglass frame of the present invention;

Fig. 2 is a front view of a pair of primary eyeglass frames;

Fig. 3 is a top view of the auxiliary eyeglass frame;

Fig. 4 is a top view of the primary frame with nosepieces omitted;

Fig. 5 is a front view of the primary and auxiliary frame combination;

Fig. 6 is a top view of the primary and auxiliary frame combination with nosepieces omitted;

Fig. 7 is a cross sectional view taken along lines 7-7 of Fig. 6 showing the positioning of the magnetic attachment between the primary and auxiliary frames;

Fig. 8 is a top view of a primary eyeglass frame according to a second embodiment wherein a portion of each temple member extending for only part of the temporal region is formed from flexible shape memory alloy to provide a relatively flexible link;

Fig. 9 is a top view of a primary and auxiliary eyeglass frame combination according to

another embodiment of the invention wherein a portion of the temple members formed from flexible shape memory alloy extends for substantially the entire the temporal region; and

Figure 10 is a top view of the primary frame of the embodiment shown in Fig. 9.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to the drawings, and in particular Figs. 1-4, a primary and auxiliary frame combination in accordance with the present invention is comprised of a auxiliary eyeglass frame 10 containing a first set of lenses therein and an primary eyeglass frame 20 containing a second set of lenses therein. The auxiliary eyeglass frame 10 includes a bridge 13 and temporal extension 11 on each side. Each temporal extension 11 contains a magnet 12 mounted at a top of the extension 11 in an upwardly protruding through-socket 16 formed at a free end of the extension 11, as shown in Fig. 6. The primary eyeglass frame 20 includes two side portions each having a temporal region with temporal extension 21 to which the temporal members 22, for engaging a wearer's head or ears, are pivotally connected. The primary eyeglass frame 21 also includes a bridge 25. Each temporal extension 21 contains a magnet 24 mounted to the bottom of the extension 21 in a through-socket 23. The bridges 25 and 13 of the primary frame and the auxiliary frame, respectively, are made of a flexible shape memory alloy, such as NiTi or CuAlBe, providing a relatively flexible or deformable link.

As seen in Figs. 5 and 6, the auxiliary eyeglass frame 10 is secured in front of the primary eyeglass frame 20 by the magnetic force between magnets 12 and 24. As a result, the auxiliary eyeglass frame 10 is securely mounted from the underside with the second temporal extensions underneath respective first temporal extensions and will not easily be disengaged from the

primary eyeglass frame 20. It should be noted that magnets 12 and 24 are not embedded in the temporal extensions 11 and 21. Thus, the temporal extensions are not hollow and are less likely to break.

Fig. 7 shows the magnetic engagement between the magnets 12 and 24. The temporal extensions are in contact with each other and there is a slight gap between the magnets 12 and 24 with magnet 12 aligned underneath magnet 24. Magnet 12 is slightly recessed into the through-socket 15 of the temporal extension 11, while magnet 24 is mounted flush to the temporal extension. In an alternative embodiment, magnet 12 may be mounted flush to the top of the through-socket 15 of the temporal extension 11 and magnet 24, whilst mounted to the bottom of the temporal extension 21 may be slightly recessed into the through-socket 26 of the temporal extension 21. Thus, the magnets do not come directly into contact with one another, but are close enough to still be attracted. The advantage of not having the magnets come into direct contact is that it prevents them from becoming damaged.

In the second embodiment shown in Fig 8, each temple member 22' has a linking portion 31 which is formed from flexible shape memory alloy and extends rearward from a hinge portion 32 for only part of the temporal region, providing a relatively flexible link. Each stem portion 31 is connected to a rearward portion of the temple member and to the hinge portion 32 by receipt and bonding by adhesive or solder in sockets 33 and 34 formed in the rearward portion of the temple member and in the hinge portion, respectively. Permanent magnets 24' (or suitable mechanical fasteners) are mounted on the temporal extensions 21'.

In the embodiment of Fig 8 and 9, a portion 31' of each temple members 22' formed from flexible shape memory alloy extends for substantially the entire temporal region. Permanent

magnets 24" and 12" are mounted on the bridge portions of both the primary and auxiliary frames.

While specific embodiments of the invention have been shown and described in detail to illustrate the application of the principles of the invention, it will be understood that the invention may be embodied otherwise without departing from such principles.

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